

What is claimed is:

1. An adaptive variable-length coding method whereby quantized orthogonal transform coefficients are scanned in a zigzag pattern, are modified into ~~run, level~~ data and then are variable-length coded in a coding system for image data, said method comprising the steps of:

setting a plurality of variable-length coding tables having different patterns of a regular region and an escape region according to statistical characteristics of said ~~run, level~~ data;

selecting one of said plurality of variable-length coding tables according to intra/inter mode information of the currently processed block, zigzag scanning position and quantization step size; and

variable-length-coding the orthogonal transform coefficients according to said selected variable-length coding table.

2. The adaptive variable-length coding method as claimed in claim 1, wherein said selecting step has the selection range of a plurality of variable-length coding tables having different patterns of a regular region and an escape region according to said intra/inter mode information of the currently processed block.

3. The adaptive variable-length coding method as claimed in claim 1, wherein said variable-length coding table is selected in accordance with said zigzag scanning position and quantization step size within the range determined by the corresponding mode.

4. The adaptive variable-length coding method as claimed in claim 1, wherein data of said escape region of said variable-length coding table selected in said variable-length-coding step is coded into data having variable run-length and level-length.

5. An adaptive variable-length decoding method for decoding the data coded ^{by} said ~~the~~ adaptive variable-length coding method as claimed in claim 1, in a decoding system for image data, ^{decoding} said method comprises the steps of:

setting a plurality of variable-length decoding

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tables having different patterns of a regular region and an escape region according to statistical characteristics of the ~~run~~, level~~s~~ data;

inputting intra/inter mode information transmitted from said coding system;

inputting quantization step size transmitted from said coding system;

detecting position information while zigzag-scanning by accumulating run values of ~~run~~, level~~s~~ data;

selecting one of said plurality of variable-length coding tables according to said intra/inter mode information, quantization step size and position information; and

variable-length decoding the data received according to said selected variable-length coding table.

6. The adaptive variable-length decoding method as claimed in claim~~5~~, wherein said variable-length decoding table selecting step has the selection range of a plurality of variable-length coding tables having different patterns of a regular region and an escape region according to said intra/inter mode information of the currently processed block in said mode information inputting step.

7. The adaptive variable-length decoding method as claimed in claim~~6~~, wherein said variable-length decoding table is selected in accordance with said zigzag scanning position and quantization step size within the range determined by the corresponding mode.

8. The adaptive variable-length decoding method as claimed in claim~~7~~, wherein data of said escape region of said variable-length decoding table selected in said variable-length-decoding step is decoded into ~~run~~, level~~s~~ data corresponding to variable run-length and level-length.

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